

METHOD AND APPARATUS FOR A LIGHTING MODULE IN A GRAPHICS PROCESSOR

ABSTRACT

A method and apparatus are provided for a lighting system for graphics processing. Included is a plurality of input buffers adapted for being coupled to a transform system for receiving vertex data therefrom. The input buffers include a first input buffer, a second input buffer and a third input buffer. An input of the first buffer, the second input buffer and the third input buffer are coupled to an output of the transform system. Further included is a multiplication logic unit having a first input coupled to an output of the first input buffer and a second input coupled to an output of the second input buffer. An arithmetic logic unit has a first input coupled to an output of the second input buffer. The arithmetic logic unit further has a second input coupled to an output of the multiplication logic unit. An output of the arithmetic logic unit is coupled to the output of the lighting system. Next provided is a first register unit having an input coupled to the output of the arithmetic logic unit and an output coupled to the first input of the arithmetic logic unit. A second register unit has an input coupled to the output of the arithmetic logic unit. Also, such second register has an output coupled to the first input and the second input of the multiplication logic unit. A lighting logic unit is also provided having a first input coupled to the output of the arithmetic logic unit, a second input coupled to the output of the first input buffer, and an output coupled to the first input of the multiplication logic unit. Finally, memory is coupled to at least one of the inputs of the multiplication logic unit and the output of the arithmetic logic unit. The memory has stored therein a plurality of constants and variables for being used in conjunction with the input buffers, the multiplication logic unit, the arithmetic logic unit, the first register unit, the second register unit, and the lighting logic unit for processing the vertex data.